

**B. Sc MICROBIOLOGY (CBCS STRUCTURE)**  
**SEC-1: MB 301: FOOD ADULTERATION**  
**III SEMESTER (2 HPW-2Credits)**

**Objectives**

- Differentiate between adulterated and contaminated foods; permitted additives and adulterants.
  - Learn how food can be analyzed for presence of adulterants.
  - Learn about deleterious effects of various adulterants.
- Concept of Food Safety Act and FSSAI in preventing and punishing adulteration

**Unit 1:**

1. Definition and Introduction to food adulteration.
2. Types of Food Adulteration
3. Common Food adulterants
4. Causes of Food adulteration
5. Analysis of food

**Unit 2:**


1. Effects of Food Adulteration
2. Prevention of Food adulteration
3. Detection of Common food Adulterants.
4. Food Adulteration act-1954

**REFERENCES:**

1. Jesse Park Battershall. Food adulteration and its detection . Published by Book on Demand, Miami, 2015
2. R. B. Sethi's Prevention of food adulteration act
3. Dr. Sheela.S. Prevention of Food Adulteration

**Outcomes**

- Classify various types of adulterants.
- **Perform simple lab tests for common adulterants**
- Know the effect of adulteration on health.
- **Understand the legal provisions to protect the Indian public from adulterated food.**

  
 CHAIRPERSON  
 BOS in Microbiology  
 Bhavan's Vivekananda  
 Sairikonda  
 CBCS SYLLABUS/MB/NEW/2016

  
 DR. D. SHIMA, M.Sc., Ph.D,  
 Associate Professor  
 Department of Microbiology U.C.S,  
 OSMANIA UNIVERSITY

**VI SEMESTER PRACTICALS (2 HPW-1Credit)**  
**MB 632P/A Paper VIII FOOD AND INDUSTRIAL MICROBIOLOGY**

- 1 Observation and Isolation of fungi and bacteria from spoiled fruits and vegetables
- 2 MBRT –Test for microbiological quality of milk
- 3 Isolation of antagonistic microorganisms by crowded plate technique
- 4 Isolation of amylase-producing organisms
- 5 Alcohol production and estimation; Calculation of fermentation efficiency
- 6 Citric acid production and estimation
- 7 Preparation of fermented food- Yoghurt

**REFERENCES:**

1. GopalReddy, M., Reddy, M.N., Saigopal, DVR and Mallaiah, K.V. (2007). Laboratory Experiments in Microbiology, 2<sup>nd</sup> edition. Himalaya Publishing House, Mumbai.
2. Reddy, S.M. and Reddy, S.R. (1998). Microbiology – Practical Manual, 3<sup>rd</sup> Edition, Sri Padmavathi Publications, Hyderabad
3. Dubey, R.C. and Maheswari, D.K. (2002). Practical Microbiology, S. Chand & Co., New Delhi.
4. Gupte, S. (1995). Practical Microbiology. Jaypee Brothers Medical Publishers Pvt. Ltd.

**Course outcome:**

- Knowledge of various microbes involved in the food spoilage and properties of spoiled foods.
- Awareness of food borne diseases , food poisoning and their detection.
- Understanding the general methods food preservation.
- Learn the basic principles in production of fermented foods like bread, cheese, yoghurt.
- A brief understanding of biochemical activities of microbes in milk.
- Understand the processes in production of SCP ,edible mushrooms and probiotics.
- **Acquire broad understanding in strain improvement and screening of industrially important microbes.**
- **Understand basic design of fermentor.**
- **Acquire knowledge in various microbial fermentation procedures involved in production of ethyl alcohol, glutamic acid, Beer, penicillin, citric acid, Vitamin B12, Biogas and Insulin.**

CBCS SYLLABUS/MB/NEW/2017

  
**CHAIRPERSON**  
 BOS in Microbiology  
 Phavan's Vivekananda College  
 Sainikpuri

  
**Dr. B. BHIMA, M.Sc., Ph.D,**  
 Associate Professor  
 Department of Microbiology, U.C.S,  
 OSMANIA UNIVERSITY, HYD-7.

## Report on Mush room cultivation workshop

Department of Microbiology in collaboration with S Mushroom Agri tech, Kukatpally organized a two day workshop on Mushroom cultivation, production and marketing for M.Sc final year students on 18 & 19<sup>th</sup> July ,2018.

On 18<sup>th</sup> morning, Dr.K.Prasuna, CEO of 'S' Mushroom cultivation briefed on Significance of Mushroom cultivation and methods involved . Second day, Hands on training was given to students in mushroom bed preparation , harvesting, processing and storage .This workshop had provoked entrepreneurial skills and motivated students to think about start ups in this area.



